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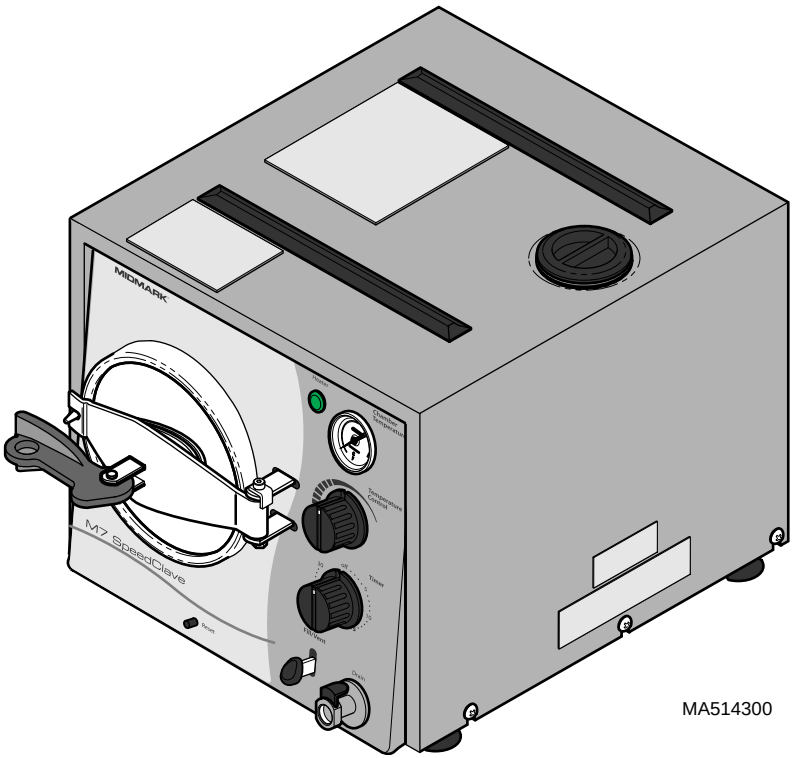
M7

Self-Contained Steam Sterilizer

MIDMARK

Installation & Operation Guide



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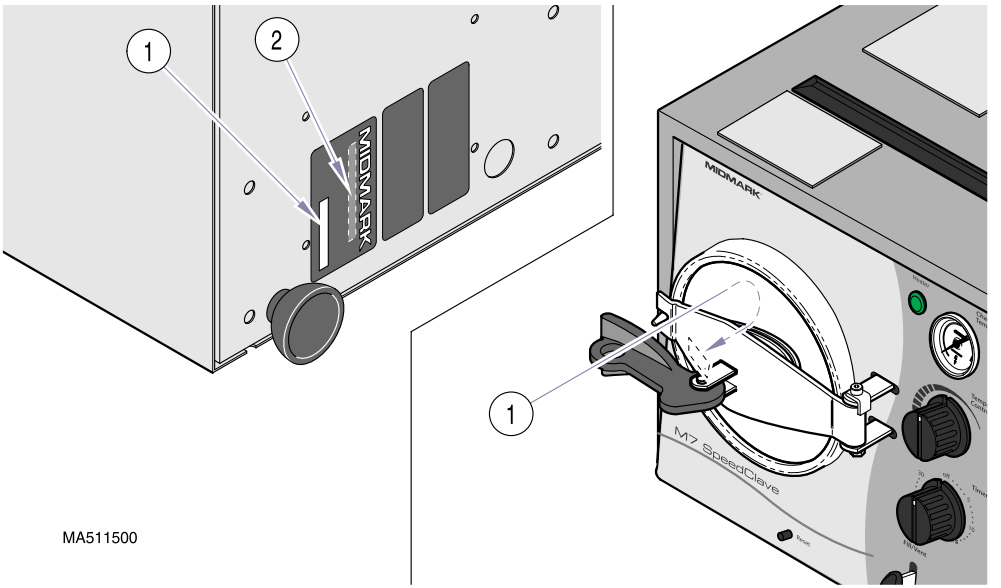
Owner's Product Identification

(information that you will need to provide for servicing - key information is highlighted)

Date of Purchase	***Serial Number (1)***
Name of Owner / Facility / Department	***Model Number (2)***
Name of Authorized Dealer	Telephone # of Authorized Dealer
Address of Authorized Dealer	



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IMPORTANT INFORMATION

Scope and Purpose of This Manual

This manual provides complete instructions for installation, operation, and normal care of M7 SpeedClave™ Steam Sterilizer. This manual is to be used by all personnel operating the sterilizer or performing operator level maintenance. No repair information is included in this manual as no repairs are authorized at operator level.

Intended Use of Product

M7 SpeedClave is intended to be used in medical and dental offices, hospitals, clinics, nursing homes, laboratories, and other facilities to sterilize heat and moisture stable, reusable equipment. Refer to “Recommended Temperatures & Times” (page 15) in this manual for detailed information.

Safety Instructions

Primary concern of Midmark is that this equipment is operated and maintained with safety of patient and staff in mind. To assure safer and more reliable operation:

- Read and understand this manual before attempting to install or operate sterilizer.
- Assure that appropriate personnel are informed on contents of this manual; this is responsibility of purchaser.
- Assure that this manual is located near sterilizer, or if possible, permanently affixed to sterilizer.

Explanation of Safety Symbols and Notes

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. The DANGER symbol is limited to the most extreme situations.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

EQUIPMENT ALERT

Indicates an imminently or potentially hazardous situation which, if not avoided, will or may result in serious, moderate, or minor equipment damage.

NOTE

Amplifies an operating procedure, practice, or condition.

Transportation and Storage Conditions

EQUIPMENT ALERT

Water must be drained from unit's reservoir before transporting or storing at 0°C (32°F) or below. Also, unit should be allowed to reach room temperature before operating. Failure to do so could result in damage to unit.

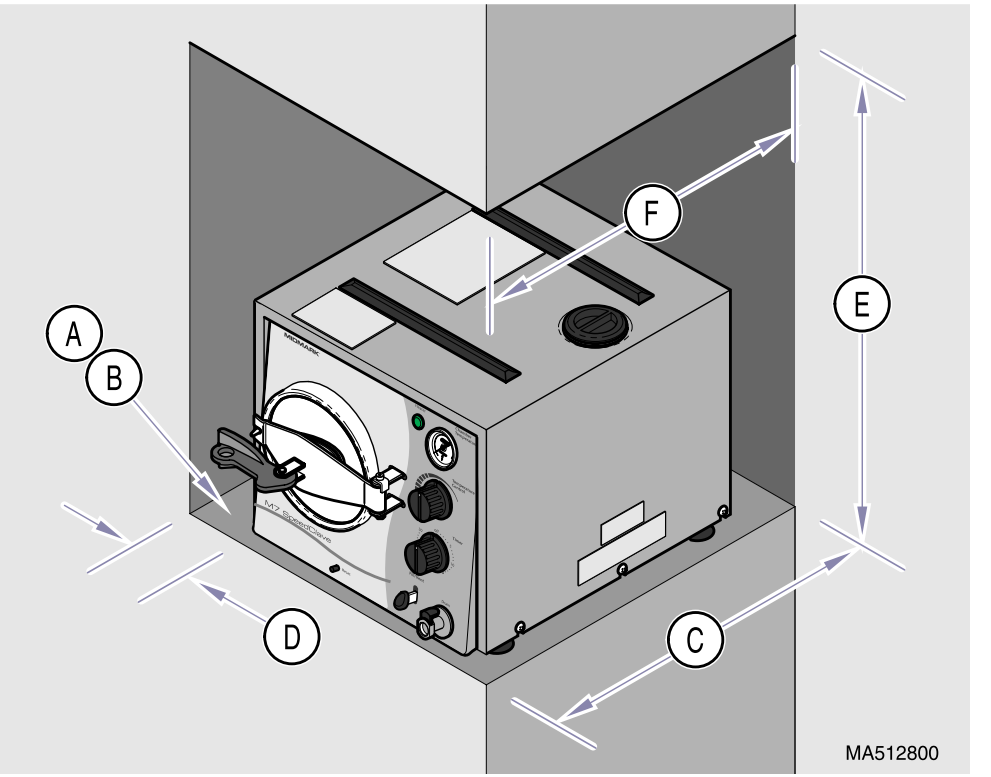
- Ambient Temperature Range:..... -40°C to +70°C (-40°F to 158°F)
- Relative Humidity..... 10% to 90% (non-condensing)
- Atmospheric Pressure ..... 500hPa to 1060hPa (0.49atm to 1.05atm)

INSTALLATION

Location Requirements For Sterilizer

DANGER
Do not operate this sterilizer in areas where flammable anesthetics are used or stored. An explosion could occur, causing personal injury.

Adherence to the following recommendations for location of the sterilizer will contribute to optimum performance of the unit:



Support Surface (A) - Sterilizer must be placed on a level surface to ensure that the chamber will fill correctly. Improper water level in the chamber could cause a sterilizer malfunction.

Support Surface Material (B) - Formica, stainless steel, or other water and heat resistant material. Heat from bottom of sterilizer could reach 71°C (160° F) on the support surfaces for short periods of time.

Support Surface Depth (C) - Support surface should be approximately 41.9 cm (16.5 in) deep. Allow at least 5 cm (2 in.) clearance behind sterilizer for air circulation.

Distance To Side Wall (D) - If sterilizer is located next to side walls, there should be no less than 6.4 cm (2 1/2 in) clearance between side of sterilizer and wall.

Distance Above Sterilizer (E) - If sterilizer is to be located beneath wall cabinets or shelves, underside of cabinets or shelves should be at least 63.5 cm (25 in) above support surface, to provide access to top inspection cover and to allow for changing printer paper roll.

Overhang (F) - If sterilizer is to be located beneath an overhang, underside of overhang should project no further than 38 cm (15 in) over rear of the sterilizer.

Location On Support Surface - Front of sterilizer should be located near front of support surface so water can be easily drained from tube into a container.

Neighboring Materials and Equipment - If sterilizer will be operated in continuous cycles, locate sterilizer where excessive emission of steam will not damage materials or equipment in surrounding area.

Re-Location Requirements For Sterilizer

1. Disconnect power cord from electrical outlet and allow sterilizer to cool.
2. Drain water from reservoir or take care not to tip sterilizer, which will allow water to spill from reservoir.

Electrical Requirements

WARNING

Use 220 - 240 VAC, 50/60 HZ alternating current only for 230 VAC models and 90 - 110 VAC, 50/60 HZ alternating current only for 100 VAC models. Failure to do so could result in electrical shock to personnel and will result in damage to sterilizer.

Do not use this sterilizer in an explosive or oxygen-enriched atmosphere. Failure to do so could result in serious personal injury or death.

NOTE

Grounding reliability can only be achieved if this unit is connected to a matching three-pronged, grounded, isolated, correctly polarized receptacle.

Electrical rating for 230 VAC unit is 230 VAC, 50/60 Hz, 5 amps. Electrical rating for 120 VAC unit is 120 VAC, 60 Hz, 10 amps. Three-pronged grounding

plug on sterilizer power cord must be plugged into a matching three-pronged, grounded, isolated, correctly polarized receptacle. Check serial number label on back panel of sterilizer to verify voltage rating for unit.

DESCRIPTION

Operational Features

M7 SpeedClave™ Sterilizers . . .

- have a three prong plug-in operation for standard electrical outlets.
- have a self-contained reservoir to hold distilled or demineralized water. No exterior plumbing required.
- have a lever for Fill / Vent located on front of unit for easy access.
- will emit an audible signal when time on cycle timer has elapsed.
- after manually venting steam pressure from chamber, door handle is placed in middle “vent” position to facilitate drying.
- have a Cycle Timer to control amount of time that load is exposed to steam at set temperature.
- have a Temperature Regulator that turns heating element On and Off to control operating temperature in chamber.
- have a Pilot Light that illuminates whenever heater is energized.
- have a Low Water Cut-Out Switch to prevent operation when water level is low.
- have a Reset Button to restore operation after Low Water Cut-Out Switch has tripped and water has been added.
- have a drain coupler located on front for easy draining of self contained reservoir.

Mechanical Features

The M7 SpeedClave™ sterilizers . . .

- have a tray rack which can hold one small and two large trays. The tray rack can be removed for periodic cleaning of the chamber, tray plate, and tray rack.
- have a Temperature Gauge to indicate internal chamber temperature. Dial is graduated from 170 to 270°F (77 to 132°C).
- have a drain coupling, adapter and hose assembly allows draining reservoir from front of unit.

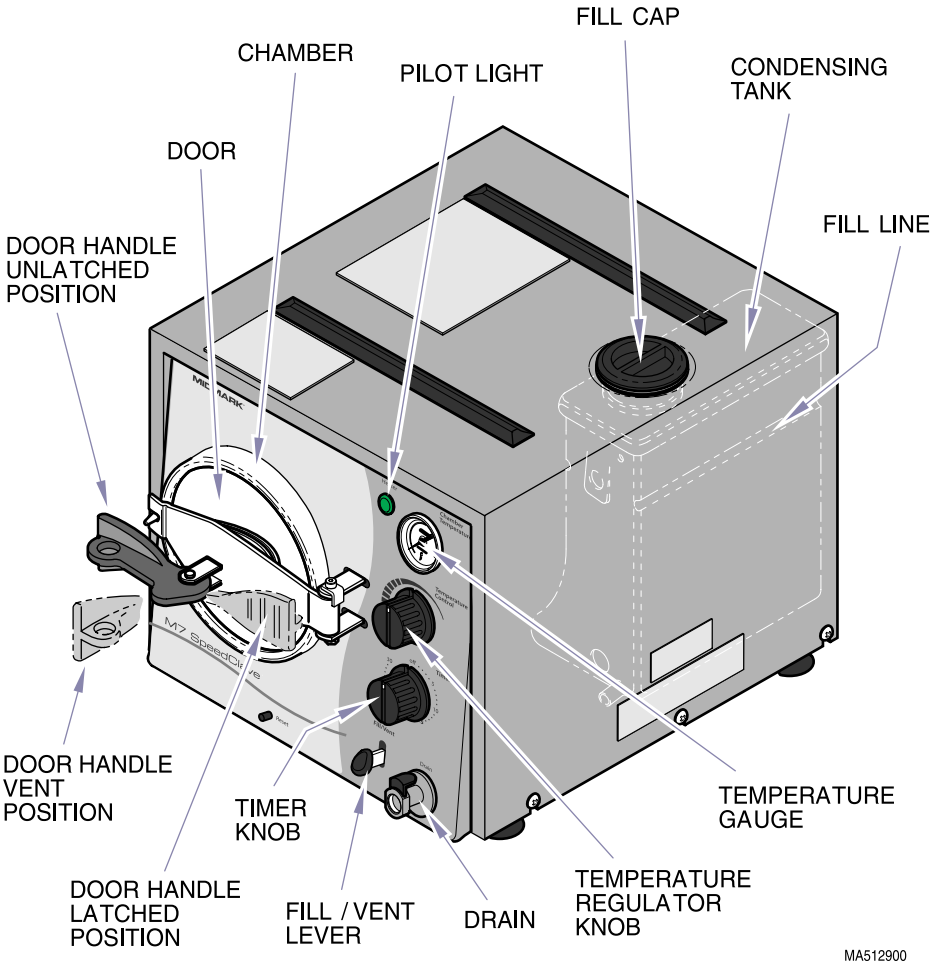
Safety Features

The M7 SpeedClave™ sterilizers . . .

- have their ***chamber temperature monitored*** during a cycle to prevent an overheat condition. If chamber temperature reaches or exceeds 146°C (295°F), power to the sterilizer is cut off.
- have a ***pressure relief valve*** which opens at 31 psi (214 kPa) to provide backup protection to reduce chamber pressure in event that chamber steam pressure exceeds allowable limit. Released steam is directed out to reservoir.

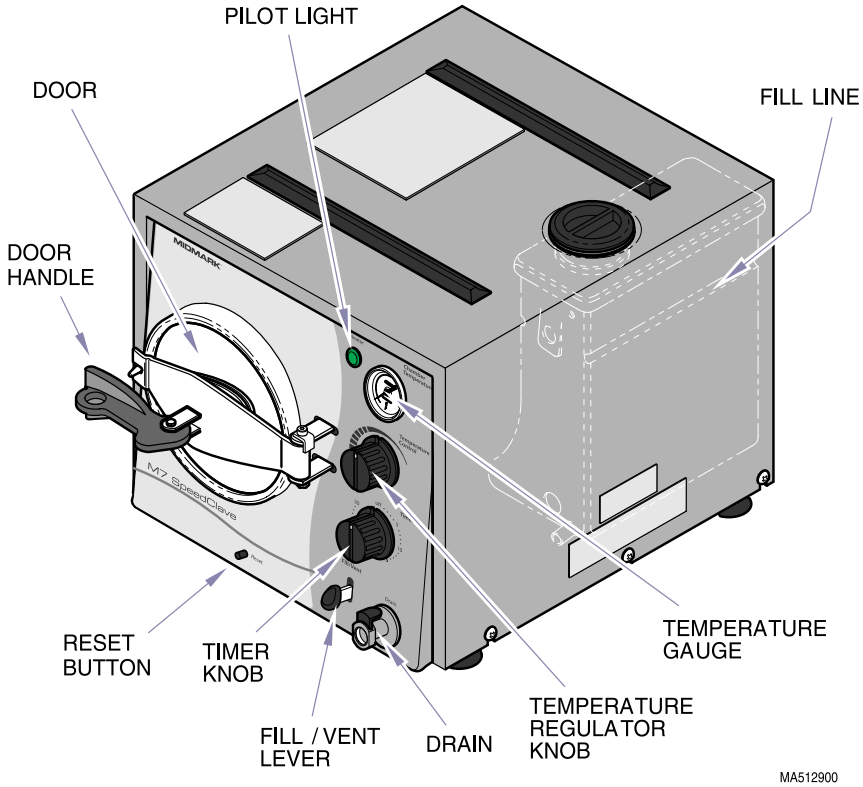
COMPONENTS OVERVIEW

The illustration below shows the location of the sterilizer's major components and their descriptive name.



CONTROLS & INDICATORS

The following illustrations show the location of the sterilizer's controls and indicators and the chart on the following pages describes their function.



Control	Function
TEMPERATURE REGULATOR	*Controls operating temperature in chamber. A dial stop prevents setting temperature higher than 270°F (132°C).*
CYCLE TIMER	*Controls time that load will be exposed to steam at set temperature. Timer will buzz at termination of cycle. Timer is graduated in minutes from 0 to 30 and functions as ON/OFF switch.*
PILOT LIGHT (green)	*Illuminates when heater is energized.*
TEMPERATURE GUAGE	*Indicates temperature in chamber. Dial is graduated from 170 to 270° F (77 to 132° C).*
RESET BUTTON	*Restores power after Low Water Thermostat has opened. After unit has cooled, depressing the Reset Button closes thermostat.*

Control	Function
FILL / VENT LEVER	*Depressing lever, admits water to chamber before a cycle and vents water amd steam from chamber to reservoir after cycle.*
FULL INDICATOR	*Provides a visual reverence for operator to indicate when reservoir is at Full capacity. Located inside reservoir and visible thru Fill opening.*
DRAIN COUPLING	*Located on front, drain coupling is normally closed. When adapter / hose assembly is inserted into coupling it opens allowing drainage of unit. Depressing coupling release lever allows adapter to be removed.*
DOOR	*Self-aligning door pivots on a crossarm, hinged to body. Crossarm is spring loaded. Pressure applied by handle securely closes door. Door is opened by releasing handle pressure.*
DOOR HANDLE	*Door handle has three positions, LATCHED....VENT....UNLATCHED.*

OPERATION

WARNING

Do not use this sterilizer in an explosive or oxygen-rich atmosphere, or where flammable anesthetics are stored. To do so could result in an explosion or fire.

Do not use this sterilizer for sterilizing volatile substances or for any purpose other than its intended design. Burns and toxic or explosive conditions could result.

Clean and dry instruments before putting them into sterilizer. Incomplete and improper cleaning of instruments will impede sterilization and will result in unsterile instruments which could lead to personal injury or death.

If sterilizer malfunctions, immediately unplug sterilizer. If sterilizer continues to malfunction, call for service; do not attempt to repair sterilizer yourself.

Do not force door handle at any time. Chamber pressure may cause door to open with extreme force. If door handle does not move freely, allow unit to cool and depressurize for 40 minutes before opening door. Failure to adhere could result in serious personal injury or death.

EQUIPMENT ALERT

Do not use toweling or packaging which may contain chlorine bleach residue. Doing so could result in trays and/or chamber rusting or discoloring. In extreme cases, the life of the chamber may be significantly shortened.

Recommended Steam Sterilization Monitoring Program

NOTE

Use sterility monitors with each sterilization load. Also, if sterilization cycle is terminated prematurely, reprocess instruments to ensure sterility of load.

EQUIPMENT ALERT

Processing goods using an incorrect sterilization program could result in unsterile goods and may damage instruments. Consult with your supply manufacturer for specific sterilization instructions.

Physical monitors (temperature and pressure measuring devices) can be used to help detect failures in sterilizer function.

NOTE
Process monitors *must be rated* for use with *Gravity Displacement Steam Sterilizers.*

Process monitors, such as biological indicators and chemical indicators, should be included in each sterilization cycle. Process monitors detect whether cycle parameters were delivered. Process monitors cannot establish that a processed item is actually sterile. If monitors detect a failure, the user must determine source of failure. Failures could result from improper packaging, loading, or sterilizer malfunction. Follow process monitor manufacturer's instructions for proper selection, storage, use, and interpretation of their devices.

Follow appropriate agency (state dental or medical board) for sterilization monitoring guidelines for your office. Additional information can also be obtained from CDC, AAMI, OSAP, and ADA regarding monitoring programs or other sterilization issues.

Cleaning Instructions

DANGER
Clean and dry instruments before putting them into sterilizer. Incomplete and improper cleaning of instruments will impede sterilization and will result in unsterile instruments which could lead to personal injury or death.

1. Clean instruments in accordance with instrument manufacturers' and OSHA's recommendations.
2. Thoroughly wash instruments to remove gross debris (either manually or using an ultrasonic cleaner).
3. Rinse instruments thoroughly.
4. Dry instruments.

Guidelines For Loading Trays

Sterilizer loading is critical to effective sterilization. Protective coverings designed to be used in steam sterilization processes should be used to help ensure that items retain sterility until used. A proper load for a sterilizer is determined by number of items to be sterilized, their characteristics, and how they are prepared and positioned within sterilizer. A single large item may be maximum load for that type of item while maximum load for very small items may contain hundreds of items. Large and small items can be included in same load. Sterilization process will be effective if items are properly prepared and positioned, so they get adequate contact with steam for correct amount of time.

M7 sterilizers are equipped with two large and one small tray to maximize number of items that can be processed at one time and provide separation for better steam flow and penetration. Three properly loaded trays, as noted in chart on page 14 (two large and one small), is the maximum load for M7 sterilizers.

General Guidelines

- Sterilize jointed instruments in an open position.
- Place all containers so opening allows steam to enter and air to leave the container (containers are usually positioned on their side or with opening tilted slightly down).

- Pouch or wrap items to preserve sterility after processing. Use only protective coverings designed and recommended for use with steam sterilization.
- Do not wrap items too tightly. Steam penetration will be affected if an item has excessive wrapping.
- Do not stack trays on one another. Using Midmark's standard tray rack and trays provides proper tray spacing.
- Position loads on trays with appropriate space between items. Adequate space is required between items to allow proper steam flow and drying.
- Place unwrapped items on a towel.

Listed below are maximum recommended loads for each tray:

	Maximum Capacities		
Load Type	**M7 Large Tray**	**M7 Small Tray**	**Sterilizer Total**
Solid Items	21 instruments - 1100 grams (2.4 lbs.) ***or***	14 instruments - 700 grams (1.6 lbs.) ***or***	56 instruments - 3.6 kg (8.0 lbs) ***or***
Packs (‡)	1080 cu. cm up to 2.5 cm thick (66 cu. in. up to 1 in. thick)	780 cu. cm up to 2.5 cm thick (48 cu. in. up to 1 in. thick)	2940 cu. cm up to 2.5 cm thick (180 cu. in. up to 1 in. thick)

‡ *Packs to have a minimum of 1/4 in. (6.3 mm) space between each other and away from all sterilizer surfaces.*

Recommended Temperatures & Times.

TEMP / PRESSURE / EXPOSURE TIME * (minimums)	ITEMS TO BE STERILIZED *(Always consult the item manufacturer's recommendations for sterilization.)*
270°F (132°C) / 186 kPa (27 psi) for 3 minutes Exposure Time*.	Instruments loose on a tray. Open glass or metal canisters. Tubing not used in surgical procedures. Items manufacturers recommend for exposure at 270°F (132°C) for 3 minutes. The sterility of unwrapped items is compromised on exposure to a non-sterile environment.
270°F (132°C) / 186 kPa (27 psi) for 15 minutes Exposure Time*.	Instruments. Loosely wrapped individual instruments. Multiple layers of instruments separated by fabric. Wrapped trays of loose instruments. Tubing not used in surgical procedures. Items manufacturers recommend for exposure at 270°F (132°C) for 15 minutes.
250°F (121°C) / 104 kPa (15 psi) for 30 minutes Exposure Time*.	Textiles and surgical packs wrapped for sterilization. Items, except liquids, manufacturers recommend for exposure at 250°F (121°C) for 30 minutes.

*** Exposure time** is total time required for sterilization of load. This period begins when sterilizer reaches sterilization temperature. That temperature must then be held for the amount of time as recommended in above chart. Heat up and cool down times are not to be included.

Suggested Extended Time At Reduced Temperature For Higher Altitudes

At altitudes higher than 1000 ft. (305 m) above sea level, maximum temperature that unit achieves may be less than 270°F (132°C). This is due to the lower atmospheric pressure at higher altitudes causing the pressure relief valve to open before the chamber can reach 270°F (132°C).

In order to be able to use standard sterilization monitoring methods and materials use the following:

- Process **UNWRAPPED** items at **250°F (121°C) for 15 minutes exposure time***.
- Process **WRAPPED** items at **250°F (121°C) for 20 minutes exposure time***.

List of Authorized Accessories

Listed below are accessories which are authorized for use with this sterilizer:

Accessory Name	Order Number
• Speedclean, 1 bottle	002-0396-00
• Speedclean, 1 case (12 bottles)	002-0396-01

Sterilizer Preparation Before Operation

EQUIPMENT ALERT
Check serial number label on bottom panel of sterilizer to verify voltage rating for unit. Failure to do so could result in damage to unit.

1. Locate sterilizer and plug in its power cord in accordance with Installation Instructions contained earlier in this manual.

EQUIPMENT ALERT
Use only distilled or demineralized water. Normal tap water contains minerals, especially chlorides, which have corrosive effects on stainless steel. Failure to use distilled or demineralized water may cause serious deterioration and premature failure of stainless steel chamber which could result in serious injury or death.

Fill Reservoir

1. To fill reservoir, remove cap and fill reservoir to *Full Mark.* Look into fill hole to see Full Mark. Replace cap when full.

NOTE
Do not overfill reservoir. Overfilling may cause water splashing out reservoir, and / or siphoning back into chamber during venting, sterilized products being wet and possibly water running out bottom of door.

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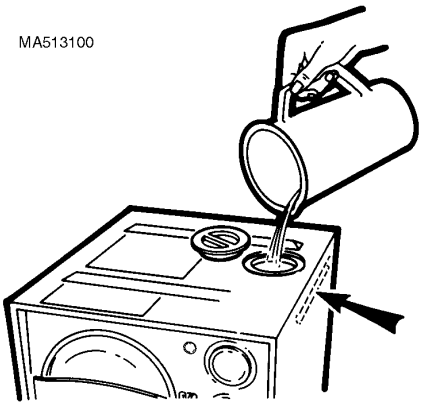
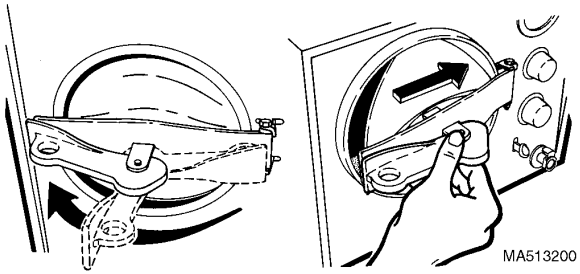


Operation

Open Door

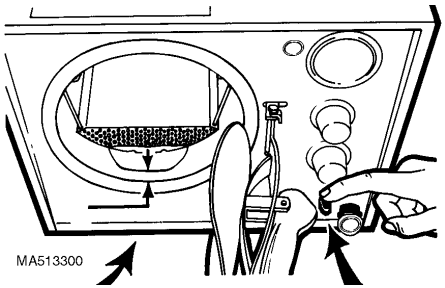
1. Swing door handle to left, UNLATCHED postion.
2. Push door & cross arm assembly toward right while pulling outward on assembly.



Fill Chamber with Water.

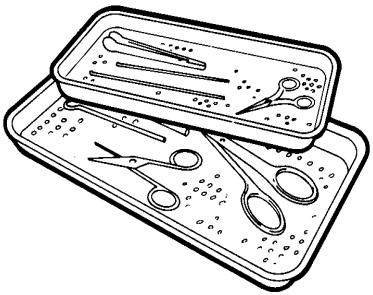
1. Press and hold down Fill / Vent lever until incoming water from reservoir is approximately 1/2" (1.27 cm) from front of chamber rim.

NOTE
It takes approximately 30 to 40 seconds before water becomes visible in chamber.



Place Trays Into Chamber.

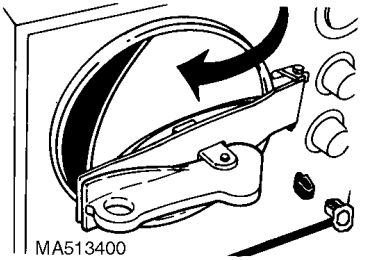
NOTE
Always include an internal process indicator strip with each sterilizer load to verify gross heat penetration.



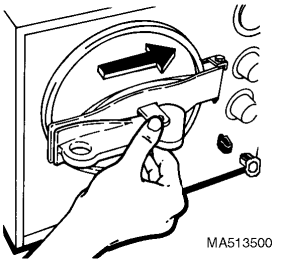
1. Load trays into chamber. Do not pack contents of trays too tightly as air must circulate around each object for proper sterilization and drying.

Close Door.

1. Swing door assembly to left until it stops (in almost closed postion).

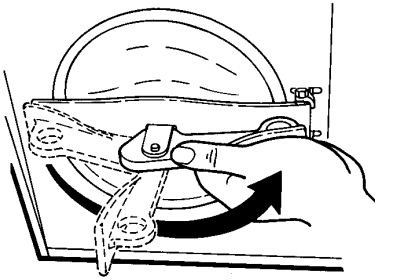


2. Push entire door to right so that right edge of door is fitted inside chamber rim. When handle is released, door will spring toward left, fitting inside chamber.



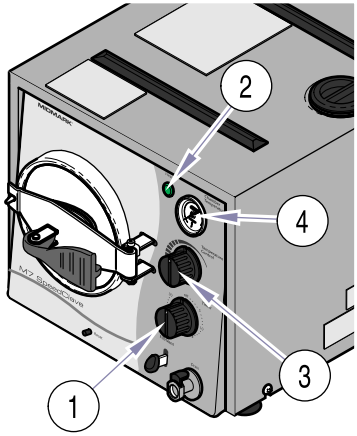
Latch Door.

1. Swing door handle all way to right.



Set Time and Temperature.

NOTE
To set proper time and temperature refer to chart on top of sterilizer or to “Recommended Temp. & Times” (Page 15).



MA513600

1. Set Timer (1) to approximately 15 minutes. Pilot Light (2) illuminates to show heater is on.
2. Turn Temperature Regulator (3) knob **fully** to left (counterclockwise). This is maximum setting of 270° F (132° C).

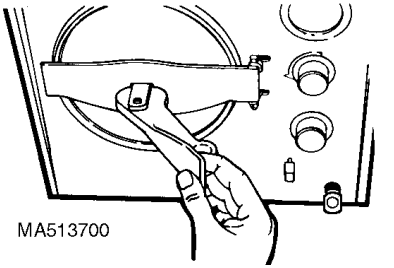
NOTE
If desired temperature is 250° F (121° C) instead of 270° F (132° C) when Temperature Gauge (4) reaches 250° F (121° C) *immediately* turn Temperature Regulator knob (3) *slowly clockwise* until pilot lights (2) goes out. Place a piece of tape or a mark on front face of sterilizer to mark position of knob for future reference.

3. When Temperature Gauge (4) reaches desired temperature then, reset Timer (1) for desired sterilization time. Pilot Light (2) will flash on and off during sterilization cycle.

Venting Sterilizer

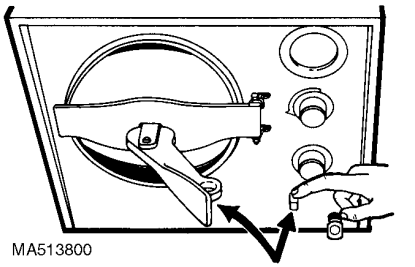
NOTE
Allowing Sterilizer to set *without venting* will cause items to come out wet.

1. When cycle is complete buzzer will sound for 1 minute. Turn timer off and place door handle to Vent position.


MA513700

NOTE
Sterilizer makes loud gurgling sound while it vents. Opening door after venting will prevent items from drying properly. Leave door handle in Vent position.

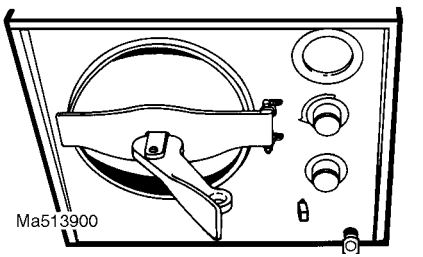
2. Hold Fill / Vent lever down until door "pops" inward and then release lever. Leave door handle in Vent position. *Do not open door*.


MA513800

Drying Cycle

EQUIPMENT ALERT
Do *not* turn on heat or open door during 15 minute drying period.

1. Allow door handle to remain in Vent position for 15 minutes. Do ***not*** open door or turn on heat during this time period.
2. After Drying time has elapsed, open door and remove contents. Trays may be placed on racks located on top of sterilizer.


Ma513900

OPERATOR MAINTENANCE

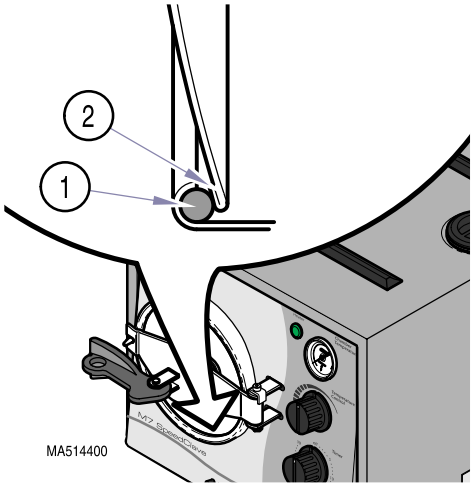
It is responsibility of user to establish a periodic maintenance procedure to assure correct operation of equipment and reliable sterilization of loads. Contact your local distributor or representative to develop a program for planned maintenance.

Daily

1. Clean External Surfaces - Wipe with a soft dry cloth and wash occasionally with a damp cloth and mild soap or detergent.

WARNING
Make sure that unit is cool when cleaning door gasket and any mating surfaces. Failure to do so could result in serious burns to hands.

2. Clean Sterilizer Door Gasket - Clean door gasket (1) and mating surface (2) with a damp cloth. Examine gasket (1) for possible damage that could prevent a good sealing surface.

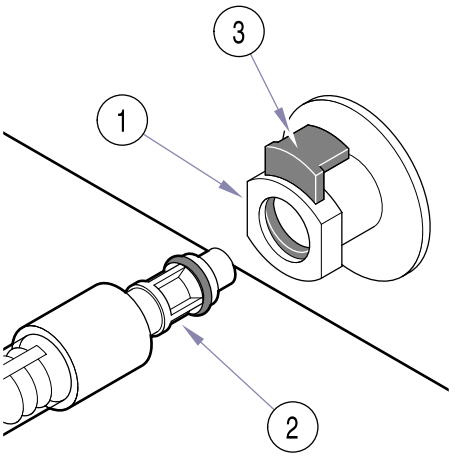


Weekly

EQUIPMENT ALERT

Do **not** use abrasive or bleaching agents in chamber (i.e. steel wool, scouring powder, bleach, etc.). Also, **never** use a wire brush. If these materials are used, possible damage to metal surfaces of chamber and other components could result.

1. Clean Chamber and Trays - Sterilizing chamber and instrument trays should be cleaned weekly.
   Drain water from reservoir - A drain coupling (1) is located on front of unit. Insert adapter / hose assembly (2) into coupling and drain into container or sink.
   Remove adapter / hose assbly. (2)
   Depress release lever (3) to disengage adapter while pulling outward.
   Wash inside of chamber and trays
   Use mild soap or Speed-Clean and distilled or demineralized water.
   Refill reservoir
   Use distilled or demineralized water only.



MA514000

NOTE

If drain coupling (1) drips after inserting adapter / hose assembly (2) remove and reinsert adapter / hose assembly several times. This will clean seals, stopping the leak.

Monthly

1. Flush the System - To protect intricate parts of unit, system must be flushed once a month with Speed-Clean Sterilizer Cleaner:

   (a) Drain reservoir and fill with clean distilled or demineralized water.

   (b) Add one (1) ounce of Speed-Clean Sterilizer Cleaner to a cool chamber then, fill chamber to its normal level.

   (c) Run one 6 minute cycle at 270°F (132°C). *Instruments must not be sterilized while cleaning sterilizer*.

   (d) Drain cleaning solution from chamber and reservoir. Fill reservoir with clean distilled or demineralized water and run one 3 minute cycle at 270°F (132°C).

   (e) Drain reservoir and allow sterilizer to cool to room temperature and remove trays from wire rack.

   (f) Lift up on left edge of tray plate (1) until tray plate “pops” free of wire rack (2).

   (g) Hold tray plate (1) in a vertical position, and remove from chamber.

   (h) Gently squeeze bottom of wire rack (2) together and remove from chamber.

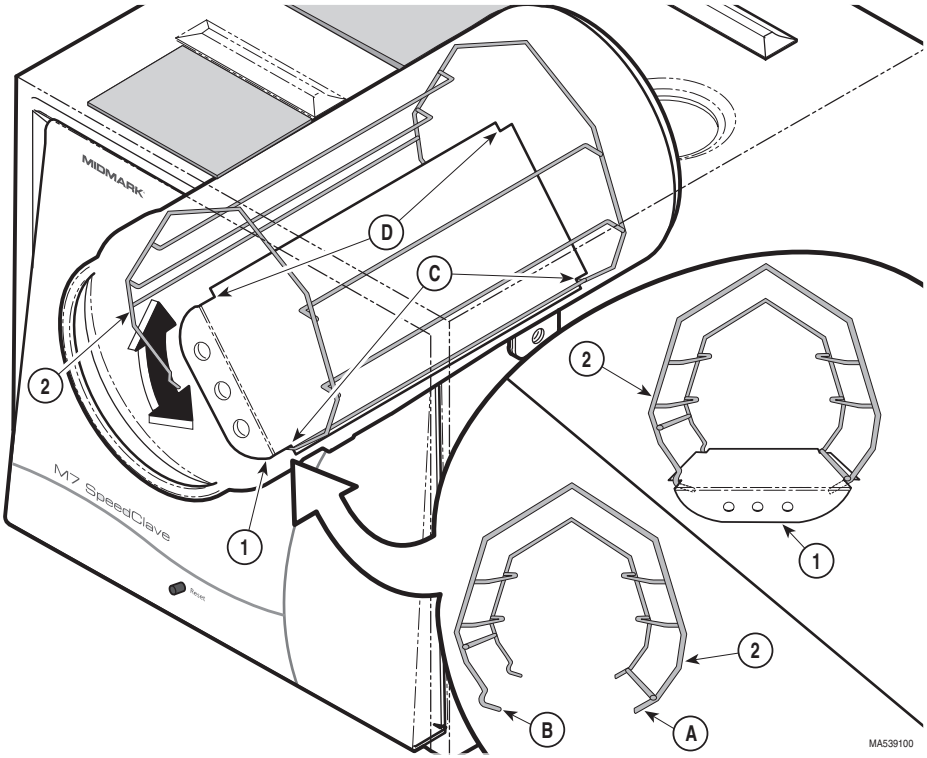
   (i) Wipe out inside of chamber being careful not to damage heater element.

   (j) Wipe off trays, wire rack, and tray plate..

NOTE
Be sure to install the wire rack so that the straight ends (A) of the rack are on the right side of the chamber, and the offset ends (B)of the rack are on the left side of the chamber.

   (k) Gently squeeze bottom of wire rack (2) together and insert into chamber, pushing rack in as far as it will go.

   (l) Hold the tray plate (1) in a vertical position with the right side of the tray plate down; then insert it into the chamber.



(m) Place the right side of the tray plate (1) under the bottom wire of rack (2) so the the straight ends (A) of rack align with notches (C) of tray.

NOTE
When performing the following step, it may be necessary to spread wire rack open slightly to engage offset ends (B)of rack with notches (D) of tray plate.

(n) Holding the right side of tray plate (1) under bottom wire of rack (2), push left side of tray plate (1) down until offset ends (B) of rack engage with notches (D) of tray plate.

(o) Refill reservoir with clean distilled or demineralized water. Sterilizer is ready for use.

(p)

Troubleshooting Guide

Use the following table to assist in correcting minor problems with the sterilizer.

Problem	*Possible Cause*	*Solution*
Pilot light does not illuminate when timer is set. Unit won't heat up.	*Power cord is not plugged into wall outlet.*	*Plug power cord into wall outlet.*
	Facility circuit breaker providing power to unit is tripped.	*Reset circuit breaker. If it continues to trip contact an authorized service representative. (See Calling For Service later in this manual.*
	Manual Reset overheat thermostat is tripped.	*Allow unit to cool for 15 - 20 minutes. If necessary, add distilled water to reservoir and assure water level in chamber is at correct level. Press RESET button on front panel and run cycle.*
	Auto-reset overheat thermostat is tripped.	*Allow unit to cool for 15 - 20 minutes. If necessary, add distilled water to reservoir and assure water level in chamber is at correct level. Press RESET button on front panel and run cycle.*
Sterilization failure evidence from process monitor (chemical indicator, biological indicator, etc.)	*Sterilization conditions were not present at location of indicator.*	*Reload sterilizer in accordance with Guidelines for Loading Trays. If problem recurs, take unit out of service and contact an authorized service representative (see Calling For Service later in this manual).*
	Insufficient air removal, low temperature, or low pressure.	*Take unit out of service and contact an authorized service representative (see Calling For Service later in this manual).*

Problem	Possible Cause	Solution
Sterilization failure evidence from process monitor (chemical indicator, biological indicator, etc.) (continued)	*Indicator is out of date, is inappropriate for sterilizer cycle, or has malfunctioned.*	*Use an indicator, appropriate for load and cycle selected, from a fresh supply that has been stored properly. Contact indicator manufacturer for additional information on proper selection, use, storage, and potential misapplication or malfunction.*
Water leaks out of door front.	*Door gasket is damaged or dirty.*	*Allow sterilizer to cool; then clean or replace door gasket (see Remove and Clean Door Gasket under Quarterly maintenance in this manual).*
	Sterilizer is not level.	*Level sterilizer.*
	Overfilling chamber	*Fill chamber until water level is within 1/2" (1.3 cm) of front chamber door rim.*
	Reservoir is over Full Mark. Water siphoning into chamber.	*Drain reservoir until water level is within limits.*
Packs not dry	*Sterilizer is overloaded.*	*Reload sterilizer in accordance with Guidelines for Loading Trays. If problem recurs, take unit out of service and contact an authorized service representative.*
	Sterilizer is not level	*Level sterilizer.*
	Door is being open before Dry Cycle is complete.	*Leave door in VENT position for at least 15 min. after venting unit.*
	Reservoir is over Full Mark.	*Drain reservoir until water level is within limits.*
	Input voltage is too low.	*Have a qualified electrician connect sterilizer to a separate (dedicated) circuit with proper voltage level.*
Door handle hard to operate.	*Cam on handle (surface of handle that contacts door when in latched position) is dry.*	*Lubricate cam part of handle with high temperature grease (300°F [149°C]).*

CALLING FOR SERVICE

If you are having a problem or have a question, refer to inside front cover of this manual and call your dealer. *Make sure that you have information that is highlighted on inside front cover of this manual available,* ***especially Model and Serial Number.***

SPECIFICATIONS

Physical Dimensions:

Overall Length	48.3 cm (19 in.)
Overall Width	35.6 cm (14 in.)
Overall Height	33 cm (13 in.)
Shipping Carton	61 cm x 40.6 cm x 40.6 cm (24 in. x 16 in. x 16 in.)
Counter Area	42 cm (D) x 39.4 cm (W) (16.5 in. x 15.5 in. includes 5 cm [2"] clearance on one side and back)
Chamber	19.0 cm Diameter x 38.1 cm depth (7.5 in. Diameter x 15 in. depth)
Door Opening	16.8 cm (6 5/8 in.)
Large Trays (2)	30.5 cm x 14.3 cm x 22.2 cm (12 in. x 5 5/8 in. x 7/8 in.)
Small Trays (1)	30.5 cm x 10.5 cm x 2.22 cm (12 in. x 4 1/8 in. x 7/8 in.)

Weight:

Empty Reservoir	13.6 kg (30 lb.)
Full Reservoir	19.0 kg (41.8 lb.)
With Shipping Carton	17.7 kg (39 lb.)
Water Reservoir Capacity	Approximately 4.96 Liters to full mark (1.31 gallons)
Chamber Safety Valve	set at 214 kPa (31 PSI)

Electrical Requirements:

NOTE: A separate (dedicated) circuit is recommended for this sterilizer. Sterilizer should not be connected into an electrical circuit with other appliances or equipment unless the circuit is rated for the additional load.

100 VAC, 50/60 Hz Model	15 Amp Circuit, Single Phase
120 VAC, 60 Hz Model	10 Amp Circuit, Single Phase
220-240 VAC, 50/60 Hz Model	5 Amp Circuit, Single Phase

Maximum Power Consumption:

100 VAC, 50/60 Hz Model ..... 1150 Watts, 12 Amps @ 100 VAC
120 VAC, 60 Hz Model ..... 1150 Watts, 10 Amps @ 120 VAC
220-240 VAC, 50/60 Hz Model ..... 1150 Watts, 5 Amps @ 240 VAC

Certifications & Listings ISO-9001
UL 544
CSA 151
CUL 151

LIMITED WARRANTY

SCOPE OF WARRANTY

Midmark Corporation (“Midmark”) warrants to the original purchaser its new Alternate Care products and components (except for components not warranted under “Exclusions”) manufactured by Midmark to be free from defects in material and workmanship under normal use and service. Midmark’s obligation under this warranty is limited to the repair or replacement, at Midmark’s option, of the parts or the products the defects of which are reported to Midmark within the applicable warranty period and which, upon examination by Midmark, prove to be defective.

APPLICABLE WARRANTY PERIOD

The applicable warranty period, measured from the date of delivery to the original user, shall be one (1) year for all warranted products and components.

EXCLUSIONS

This warranty does not cover and Midmark shall not be liable for the following: (1) repairs and replacements because of misuse, abuse, negligence, alteration, accident, freight damage, or tampering; (2) products which are not installed, used, and properly cleaned as required in the Midmark “Installation” and or “Installation / Operation Manual for this applicable product. (3) products considered to be of a consumable nature; (4) accessories or parts not manufactured by Midmark; (5) charges by anyone for adjustments, repairs, replacement parts, installation, or other work performed upon or in connection with such products which is not expressly authorized in writing in advance by Midmark.

EXCLUSIVE REMEDY

Midmark’s only obligation under this warranty is the repair or replacement of defective parts. Midmark shall not be liable for any direct, special, indirect, incidental, exemplary, or consequential damages or delay, including, but not limited to, damages for loss of profits or loss of use.

NO AUTHORIZATION

No person or firm is authorized to create for Midmark any other obligation or liability in connection with the products.

THIS WARRANTY IS MIDMARK’S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. MIDMARK MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS.

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